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The Examination of Milk for Tubercle Bacilli: A Reply.

By H. T. Matthews, B.V.Sc., F.R.C.V.S., D.V.H., Veterinary Department, Liverpool.

The article by Wood under the above title, published in *The Analyst* of September, 1930, and reprinted in the *Veterinary Record* of October 11th, 1930, cannot be permitted to stand unrefuted. It is a record of comparative failure, and the author is to be congratulated on his courage in publishing his lack of results. But the veterinary profession can hardly view with equanimity a publication which suggests that failure is inevitable, or even likely, which will be regarded in some circles as authoritative. With respect to the author, the whole article offers the strongest evidence for the employment of trained veterinary surgeons in the detection and elimination of tubercle from the milk supply.

One section of the article is devoted to the "Relative Value of Microscopical and Biological Tests," in which, apparently, the latter is accepted as wholly efficacious. The author is in consonance with the majority in his assumption that the biological test for tubercle is exact, beyond criticism in its accuracy, omniscient, and therefore valuable despite its cost and slowness. The truth is that the test is far from exact in its negative results, especially where only one guinea-pig is used. I have records of five cases of tuberculous mastitis in which the test animal returned a negative while microscopic examination of a portion of the same sample was positive, the positive diagnosis in each case being upheld on *post-mortem*. It is not infrequent, when two pigs are inoculated, for one to return a negative and the other a positive, the positive not always being the animal left alive for the longer period. Add to these the unsatisfactory number of cases in which the test animal dies of intercurrent disease, too early to establish a diagnosis. Moreover, one has experienced and heard of positive results totally unsupported by *post-mortem* examination of the suspected cow. Of course there is no proof that such positives were in error, short of sections of the whole udder or a series of pigs inoculated with portions of the udder tissue, but one is left with a somewhat ironical admiration for the extreme delicacy of the test.

When we consider mixed milks the position is complicated by outside factors so as to cause frequent confusion. I have found well-developed cases of tuberculous mastitis in herds from which a bulk sample, taken within the previous month, is eventually returned negative by inoculation test. This, of course, is not an indictment of the test so much as of the system of bulk sampling. A negative bulk sample, as ordinarily taken, is not proof that no cow in the herd is giving tuberculous milk, nor is a positive bulk sample, as Wood evidently accepts, proof of the existence in the herd of a tuberculous udder.

If, then, the biological test does not quite merit the high pedestal on which most people place it, let us examine the lowly position accorded by the author to the microscopical test. He says ". . . it was not quite realised how little one can rely upon finding tubercle bacilli microscopically in the milk of single cows." And later ". . . one can reasonably assume that in only one case in three, at the best, evidence will be obtained microscopically of the presence of tubercle bacilli." He is quite definite on the point and reproduces, with modification, a table from Savage in support. The item that intrigues me about the figures is that, despite the quoted inefficiency of the microscope, two cases are shown positive microscopically and negative by inoculation. Unfortunately, neither in Wood's article nor in Savage's book is it made clear whether the miscroscope or the guinea-pig is in error. Savage refers to them as "probably due to faulty technique," but does not ascribe the fault. The remainder of the table goes to show an error of sixty-three per cent. by microscopic methods, in single cow samples. Now I have no hesitation in attributing this appalling error as "certainly due to faulty technique." To take a round figure, of the last hundred consecutive cases of tuberculous mastitis in Liverpool cows, only once has microscopic examination failed. Every one of the hundred has been submitted to *post-mortem* examination, generally in the presence of the owner, often of other veterinary surgeons, meat inspectors, etc., and in no case has there been reason to suspect the accuracy of the positive diagnosis. Now an efficiency of ninety nine per cent. in any process of an inexact science is more than one can expect to maintain indefinitely. But it is a matter of official record that such exists to refute Wood's figures. The microscope is being used for this work all over the country by veterinary surgeons.

To give a complete answer to the question "How is it done?" is impossible here, but, briefly, it is a matter of psychology and cytology. The only man who will return a correct proportion of positives consistently, is the man who examines the cow. His interest is aroused in the case as soon as he begins to suspect clinically, strengthens with each step of his clinical examination and preparation of the specimen, till he finally gets a mild thrill of satisfaction when he demonstrates the result of his cumulative conviction. Contrast this with the attitude of a man confined in a laboratory, who has to labour with samples, each as uninteresting to him as any other, whose lack of interest is cumulative in the wrong direction. To the one a bottle of milk represents a living cow, to the other a serial number. Of course it is not enough to have seen one's victim in the flesh, but I believe it to be very helpful in achieving results.

DEPT. OF VET. MEDICINE

Cytology is given a paragraph to itself in the article. It needs a book. Wood confesses to having failed to discover anything of significance in the cells of tuberculous milk. As long ago as 1922 Torrance described a cellular phenomenon of importance. Certainly he had not worked out its full significance then, but as an observation it has stood the test of time and experience. It cannot be dealt with in detail here, but cell-grouping is so constant, so simple that the general practitioner can utilise it, and so labour-saving that it may be called the secret of success. It is hoped to publish an article on the subject in the near future.

It must be admitted that the guinea-pig is still needed when dealing with the mixed milk of a number of cows, but single milks from clinical cases of tuberculous mastitis can nearly always be determined microscopically.

In view of his footnote to the paragraph on "The Limitations of Veterinary Inspection" to the effect that his estimate of its value is likely to be modified in future, it is hardly fair to criticise the author, but then is it quite fair to publish the paragraph? Of course veterinary inspection has its limitations; so has life. But if the system of routine clinical examination is put up for comparison against bulk-sampling as a means of detecting tuberculous udders, it cannot fail to win handsomely in a fair test. Of the series of one hundred cases of tuberculous mastitis quoted above, sixteen only were found as the result of bulk-samples, and if the series were extended to embrace a longer period, the sixteen is disproportionately high. Now the herds which furnished the hundred cases were each subjected to bulk-sampling approximately once per annum, and to clinical examination three times per annum. The Somerset herds are quoted in the article as being tested by bulk-sample once in every twenty-eight years. It is a relief to be able to close on a note of agreement with the author when he says "This cannot be regarded as an adequate measure for the elimination of tuberculous milk."

Territorial Artillery and Mechanization.

The Lord Mayor (Sir William Waterlow) on Saturday of last week, expressed the hope that the City would not become "mechanized" like the Army. He was speaking at Guildhall at the presentation of prizes given by the King and Prince of Wales to the winning batteries in the recent competitions of the National Artillery Association for horse, field and medium, and heavy batteries. The Lord Mayor said he could not help regretting the passing of the horse. The Lord Mayor and the Sheriffs still used horses. That the standard of efficiency of Territorial gunners was being improved year by year, to keep pace with the progress of modern war science, was shown by the high standard of efficiency displayed by units taking part in the association's competition. Colonel C. F. Liardet, before the presentation, outlined the National Artillery Association's history, and added that gunners were going through a difficult time. Their old friend, the horse, was gradually disappearing, and they were becoming mechanized. However, the only mounted battery in the contest—the 271st (Warwick) Battery, 68th (South Midland) Field Brigade—was the winner of the King's Cup for horse, field, light, and medium artillery.

The Etiology of Milk Fever.*

By G. Moussu, Professor of Bovine Pathology, National Veterinary College of Alfort, France.

Among the affections that strike animals of the bovine species there are few which in regard to their etiology have caused the birth of more hypotheses than milk fever; few that have attracted as much attention to publications nor that have as severely tested the sagacity of researchers and experimenters.

For a long time we have possessed a method of intervention against this affection that can be described as excellent, if not perfect; a method of intervention that is sometimes miraculous, and yet we are not satisfied. We cure the disease, but we do not know how we accomplish that end, and, as a result, the etiology has interested researchers during the last few years.

As quite a number of clinicians may not have exactly followed the chain of these researches, it appears to me useful to present them here in a brief résumé.

What do we know about the etiology of this singular affection? I scandalize nobody by saying "not much."

During all the epochs we have been making hypotheses or edifying theories capable of giving satisfaction to the mind according to the scientific conceptions of the moment.

It is thus that we had the phlogistic epoch, during which we attempted to explain the appearance of the successive characteristic symptoms of the affection by the state of the temperature, the season, cold or hot, variations in air currents, none of which would be capable of bringing about such organic troubles ending in death.

All of this appears ridiculous to-day, and yet it is not entirely certain that if we do not have more respect for the opinion of our predecessors, there is a chance that those who succeed us will look upon our ideas in the same light.

Later the theories evolved toward a little more precision; it was thus that the symptomatic theories were advanced.

Starting with the observation that the patients commenced by presenting inco-ordination of movements, then a sort of posterior paraplegia, then somnolence and coma, milk fever was considered by some as a primary congestion of the spinal cord, progressively ascending; by others, as a primary congestion of the brain, followed later by œdema of the brain and then meningitis.

Naturally, these opinions were based upon favourable autopsy observations with opinions attached, if not always, at least in the majority of cases, and, in order to understand the difficulty of estimating the organic alterations, sometimes more apparent than real, the difficulty of interpreting the lesions revealed on the cadavers, always more or less altered, there is no reason to be astonished at having seen these theories implant themselves as classical fact during that time. But, little by little, doubts crept in; technicians, more discriminating than others, declared that the autopsies were not demonstrative, that the lesions of active congestions described were not observable enough to qualify as *post-mortem* lesions not also encountered in the necropsies where milk fever had not occurred, but

* From *Recueil de Médecine Vétérinaire*, February, 1930.

which do occur often as cadaveric alterations, pure and simple.

The symptomatic theories were progressively displaced to make room for the infectious theories. This came along with the microbian era. Milk fever was described as a state of postpartum morbidity, and uterine infections were invoked to explain the trouble. Micro-organisms are always found in the genital path of domestic females, as much before as after parturition, and inasmuch as milk fever existed without any signs of metritis or metro-vaginitis, the rôle of microbian poisons was invoked. These were thought to be absorbed at the level of the mucous membrane in the state of repair or, better still, in restoring the physiological state. When the rôle of ordinary micro-organisms left some doubt the rôles of anærobes and hæmocultures were invoked. And during certain years the disease was treated by antiseptic irrigations of the genital path.

Here, again, statistics enter into the situation. Distinguished practitioners, reputed and convinced, signalized that when antisepsis of the genital path was systematically practised immediately after parturition milk fever did not appear. As this method was impractical in practice because, unfortunately, our animals reproduced without the least bit of help of any kind, the number of cases of milk fever would not be sufficient to warrant the application of such a preventive measure. But we continued to treat the disease with antisepsis of the genital path and we also employed other complex and varied methods.

Other critical minds went so far as to say that if it results simply from genital infections, there is no plausible reason why milk fever was more frequent in certain categories of milk cows (heavy milkers) than in others. But at that time there was no thought given to the udder.

It did not require more to confuse the best of those who had faith in the microbian doctrines and to dismiss the idea of genital infections than the origin of the mammary theories of the disease. Nobody until that time seems to have suspected the udder. Besides, the mammæ never appeared to participate in the affection although milk fever was known to be always an affection of heavy milkers. It is unknown or almost unknown in mediocre or poor milkers, animals which give just a sufficient quantity of milk to sustain their offspring. If this is true, the mammæ should have a relation to the disease; even though it is not affected with inflammation, there is, however, always a perturbation of the lacteal function characterized by a marked decline in lactation and sometimes by almost complete suppression of the colostral secretion.

And the idea of a mammary origin by infection or intoxication was advanced. This was a perfectly new conception, sustainable, but not demonstrable. This idea was not less fertile in fortunate results because it was this theory that opened the eyes of the Danish veterinarian, Schmidt, who was the first person to cure cases of the disease in large numbers by a simple intervention on the udder (inflation). To treat a patient stretched out on the floor by inflation of the udder is simple and can appear like a practice of witchcraft, but it is efficient and evidently essential. When the diagnosis is well established and the intervention is not too tardy, inflation of the udder or mammary ærotherapy is efficacious in the large majority of cases. The percentage of mortality is so low that it can be affirmed that ærotherapy is a veritable specific treatment.

Why does it cure? With loyalty, it is fair to declare that we do not know. We have stated that mammary inflation temporarily arrests the lacteal secretions of the mammæ, and the absorption of organic poisons (and thereby cures). This is a hypothetical explanation and, moreover, it is not a demonstration. It has been said, again, that the colostrum of milk fever is toxic. This can be true to a certain extent if qualified by saying that toxic troubles are determined by injections in large doses of milk fever colostrum. But these troubles do not reproduce the classical picture of the evolution of ordinary milk fever. Therefore, we remain in the domain of hypotheses.

Mammary inflation mechanically restrains the interstitial circulation of the udder and provokes a local afflux of polynuclears capable of neutralizing the organic poisons formed by the elaboration of an abnormal colostrum. Hypotheses again! Because there is doubt on this point of departure, inasmuch as it has been formally established that milk fever colostrum can be an organic poison.

Moreover, in the domain of hypotheses when one explanation is not sufficient, one can always seek others, and it is thus that during the last few years we have seen a series of theories born on the primary origin of milk fever: state of the udder, quality of the colostrum, and the absorption of organic derivatives.

Here they are briefly enumerated and exposed in cronological order: hypoglycæmia theory, hypocholesterinæmia theory, and hypocalcæmia theory.

The theory of hypoglycæmic origin of the accidents characterizing milk fever came from Canada, apparently as a consequence of the discovery of insulin and its experimental properties, by comparison in bringing together the troubles provoked by the hypoglycæmia induced by the injections of insulin and the symptoms of milk fever. From this there was but one step to take. Moreover, the author of the idea added that injections of glucose would cure the disease just as inflation does. This was almost a demonstration; at least on paper. But it is no longer regarded as essential in practice.

Is it, therefore, true that milk fever of our milk cows corresponds to grave accidents of hypoglycæmia?

No. And at once it is important not to forget that in the symptomatic evolution there is often glycosuria in milk fever. Clinically, it does not score well with hypoglycæmia and can throw doubt on the reality of the idea. Besides, to confirm the existence of a hypoglycæmic manifest and indisputable, it would be necessary to establish what has not been done, that the average glycæmia in milk fever patients is notably under the average normal glycæmia of pregnant cows, of non-pregnant cows, or, also, of bovine animals working or on feed.

I have made these researches on a number of specimens of blood from cows in different regions of France and on healthy subjects, and have shown that the average normal glycæmia of cattle was not the same as that shown in man or in dogs taken for comparison. The normal glycæmia of our large domestic ruminants is, in principle, always less than one per thousand. It oscillates between 0·40 and 0·80, and in the course of milk fever it does not extend much beyond these limits. It cannot be said that the troubles of milk fever are hypoglycæmic, since

hypoglycæmia of 0·30 does not cause the same trouble as those of insulin origin.

Certain authors, basing upon the large elimination of cholesterine by the colostrum, have wondered if milk fever is not a hypercholesterinæmia because it is greater in quantity in the affected subjects.

In reality, during the course of gestation in cows, as in women, there is a hypercholesterinæmia up to 3 to 4 per thousand several days before parturition, while the normal level in the non-pregnants oscillates around 1. In the days which follow parturition there is a rapid drop of more than half, abundant elimination during the period of colostral secretion, but progressive regulation following without dropping under normal. This hypothesis is, therefore, no better founded than that of hypoglycæmia.

The last theory is that of hypocalcæmia; the symptomatology of accidents of milk fever would be compared with parathyroidian insufficiency and as a consequence of hypocalcæmia. In the normal state there is ·09 to ·011 grains of calcium per thousand in the blood of cows.

In the course of milk fever, Widmark and Carlens only found ·04 to ·07, and they concluded that hypocalcæmia explains better the evolution of the disease than hypoglycæmia.

I would be content to say that the partisans of the hypocalcæmia theory have not demonstrated that a hypocalcæmia of ·04 to ·07 per thousand of any origin is capable of engendering accidents comparable to those of milk fever. It is well to recall, besides, that parathyroidectomy causes suppression of calcæmic regulation and also, thyro-parathyroidectomy in ruminants does not cause accidents comparable to those of parathyroidectomy among carnivora. The point of departure of this etiologic conception of milk fever from hypocalcæmia rests, therefore, on an inexact physiologic interpretation.

Why does thyro-parathyroidectomy in ruminants not cause the same accidents as in carnivora? This is a fact that may some day be explained, but to-day it is well to hold to what is known.

There is also a clinical fact that appears to me to be in contradiction with the idea and the hypoglycæmia theory. It is that which can be noted in the course of evolution of cachexia or of osteomalacia in subjects of the bovine species. We have had cases in France, cases in number and typical during many years, especially following the war of 1914 to 1918, in what has been called the " red zone " (the zone in which the ground was terribly torn up with shells and the foraging during some years had a mineral content entirely insufficient for the proper nourishment of bovine and caprine animals). Numbers of pregnant animals in this region fall more or less into a state of decumbency; others suffer from fractures or deformation of the pelvis; numbers of calves are born in this region with a malleable skeleton, as malleable as rubber. That is to say, clinical deficiency of calcium is general; and in pregnant animals it was never noticed, in my knowledge, that there was a special frequency of milk fever.

Although there have been many analyses and more work done on milk fever, it seems that nothing decisive has been accomplished. These hypocalcæmic, hypocholesterinæmic, and hypoglycæmic observations are only relatives. It seems that the milk fever is but the result of a complex humoral dysequilibrium, but, in reality, we do not yet understand the unique or multiple determining cause, nor the active factors, nor the precise reasons and conditions under which the condition returns to normal.

The field of study is open and free to the avid minds that seek to search among the unknown.

Clinical and Case Reports.

Subcutaneous Emphysema of Pulmonary Origin in a Cow.

By J. R. Baxter, M.R.C.V.S., Lechlade.

Subject.—A dairy shorthorn cow in good condition, and aged about six years.

Available History.—I first visited this cow on February 10th, 1926, and was told that during the previous day she had dropped slightly in her milk yield and was off her feed. The bailiff apparently thought she had a chill and so gave her a dose of stimulant medicine, but later he changed his mind and thought she must have something stuck in her throat.

Initial Symptoms.—On examination she appeared distressed and stood with her head stretched out, and she certainly gave the impression of having something wrong with her throat. The respirations were laboured and her temperature was 105° F. Nothing else was visibly wrong. Auscultation of the lungs revealed pneumonic areas. The probang was passed right down into the rumen to make sure there was no obstruction in the œsophagus. On withdrawal, a small amount of pus-like material was noted on the end and this seemed to point to something having damaged the lining of the œsophagus. This was also borne out by the pneumonia, which could have been caused by some penetrating body. A few doses of Liq. ammon. acet. and Tinct. nucis vom. were left to be given twice daily.

Course.—She was next seen two days later, when she was slightly brighter and the temperature was lower. The breathing was still as bad as when she was first seen but had apparently been worse. On auscultation the pneumonic area in the lungs seemed to be improving, but a crackling sound was also to be heard. At the same time it was noticed that there was a subcutaneous emphysema which was present on both sides of the body, but more on the left than the right. On the left side it extended about half way back along the ribs, where it was sharply marked off, and a short way up the neck, where it was less sharply demarcated. On the right side the emphysema extended as far as the posterior border of the scapula and up the neck a little way, but was not nearly so prominent. This emphysema was also present on both sides behind the ribs, but was more prominent on the right than the left and was not so marked as that further forward. The rumen felt distended with gas. It was now definitely thought that the cow must have a ruptured œsophagus which was, in consequence, letting gas and food material into the mediastinum. This was further borne out by the fact that the emphysema was so much more marked on

the left than on the right side of the neck. It appeared to be a hopeless case, so slaughter was advised.

Post-mortem.—This was held on the following day, immediately after the cow had been slaughtered. The subcutaneous emphysema had increased considerably, but the bailiff said that she had seemed better. When the skin was taken off the emphysema was found to be due to ordinary air. No particular attention was paid to the intestines, as they were superficially normal.

When the liver was taken out of the carcass a large abscess was opened on the diaphragmatic surface, containing caseated pus. The walls of the abscess were about ¾-in. thick and it had a pipe-like appearance. This abscess extended through the diaphragm into the right lung, where the biggest part of it was situated. No foreign body could be found to account for its presence. This abscess had apparently nothing to do with the emphysematous condition, as, to the naked eye, the walls were intact.

Both lungs were affected with pneumonia in the lower half, but this seemed to be getting better. The bronchi and bronchioles were extremely congested and filled with a frothy, partly-clotted, blood-like material. The lungs did not collapse properly on account of an intensive interlobular emphysema and the already noticed pneumonia. The emphysema extended forwards and backwards under the vertebral column to emerge under the skin at either end of the chest.

The heart was normal apart from some slight thickening on the mitral valve. The pericardium was also normal.

The œsophagus was opened throughout its length and found perfectly healthy; it showed no signs of having sustained any injury.

As a result of the *post-mortem* it was concluded that the subcutaneous emphysema was due to rupture of the lung alveoli and this, in consequence, had let air into the mediastinum, and so under the skin. Such cases appear to be rare, judging by the paucity of literature on the condition.

Milk Fever and Intravenous Air.

By J. R. Baxter, M.R.C.V.S., Lechdale.

During the morning of June 5th, 1929, I visited a cow down with milk fever. The subject at the time was semi-conscious but lying down in a normal position. The left hind quarter was first inflated and the teat tied with tape. The left fore quarter was about half inflated when something was felt to give, but one or two further pumps were given with the bellows before it was realised that something was radically wrong. Then it was noticed that air was escaping from the fore quarter into the milk vein and surrounding tissues. The left side of the udder was therefore left, after the tape had been taken off the hind teat. It was previously noted that some air had escaped from the left hind into the left fore quarter, but no particular attention was paid to this, as some cows appear to have no definite division between fore and hind quarters.

The cow was then watched for a little while, during which time there was a definite aggravation of milk fever symptoms, coupled with a very increased rate of breathing. In about five minutes she showed signs of getting better, so the other side of the udder was inflated and the teats tied, in the usual way. A hypodermic injection of strychnine gr.$\frac{1}{30}$ was given, as usual in this practice. In about an hour's time the cow was normal except that she did not get up.

Next morning the cow appeared to be worse, but not so bad as at the time of the first visit. As reinflation was deemed dangerous, 5 c.c. of adrenalin was given subcutaneously.

The cow was next seen in the afternoon, when she appeared to be no better. It was evident that something else would have to be attempted in the curative line, so a small quantity of Calcium chloride solution was given subcutaneously in two places on the side of the neck about half way up. (This $CaCl_2$ solution had to be made up by the action on $CaCO_3$ ʒiss-ʒii of HCl, because no $CaCl_2$ could be obtained locally. This was neutralised with sodium bicarbonate, tested by litmus paper. As far as I can remember, the resultant mixture was evaporated to dryness and the powder dissolved in water). I have since realised that the quantity of water was absurdly small, being only about 150 c.c. In addition, a further 5 c.c. of adrenalin was given subcutaneously.

The cow recovered well from this point and went on to milk satisfactorily, the only trouble being that two sloughs came off the side of the neck, but the resultant wounds healed quickly.

The cure may without doubt, I think, be attributed to the Calcium chloride.

Two interesting points occur in the case, the first being the quick initial recovery of the cow after the first visit and the second the quantity of air which went into the circulation.

With regard to the recovery feature, it almost seems as though oxygen must have been quickly absorbed and utilised for some oxidation process, but that is purely guess work.

Then in respect of the air getting into the circulation—I am sure a great deal more than 10 c.c. entered the milk vein, this 10 c.c. being mentioned as a safe quantity in the abstract on Intravenous Injection and Air Embolism in the *Record* of October 11th, 1930. From the feel of the size of the bubbles in the milk vein, it would seem that something more than a litre entered at the time, but some more probably gained admittance for a time after.

Hysteria in Dogs.

A Preliminary Note.

By W. M. Scott, F.R.C.V.S., Bridgwater.

So long as we are not *au fait* with the *causa causans* of hysteria in dogs, so long must we go on treating our cases symptomatically, and in other word, empirically. The confession of ignorance, however, need not deter us from probing to the utmost the field of therapeutics as we understand it, in our endeavour to bring relief to our cases, for whether the root cause be environmental, dietetic or eugenic, we know the end phase is a neurosis,

and for this we do possess some valuable adjuvants if suitably selected. A few observations therefore, on the therapeusis of hysteria, briefly set out, may not be out of place now.

When I began the treatment of those cases I relied—possibly like most practitioners—upon Pot. brom. Then I tried Sod. brom and with this latter agent I got better results or thought I did, but still I was far from being satisfied: the action was too slow, too erratic and, often, only temporary. During the last twelve months, I have depended upon a mixture of the three bromides, *i.e.*, sodium, potassium and ammonium, combined with ammoniated tincture of valerian, and by this treatment the mental disturbances were reduced more quickly and the recurrence appeared to be less frequent.

Within the last few months I have gone a step further in treatment, but as it is largely in the experimental stage I do not feel that I should dogmatise. I give it, therefore, for what it is worth, with the view that others may be tempted to give it a trial and record their experiences. Rightly or wrongly, I am of opinion that hysteria is due to an imbalanced state of the endocrine glands, culminating in or preceded by a deficiency—of what, I do not know. The treatment is this. I begin by saturating the system with the bromides and valerian mixture, already mentioned, and when the disturbed nervous phenomena subside I give a course of hormones in tablet form night and morning before food, and after food, tincture of iodine. In those cases I prefer the French tincture, for it contains less potassium and is tolerated better by the stomach. It is advisable to begin with small doses, 1 to 3 m., according to the size of the patient. In choosing hormonics in those cases one may claim logical reasoning if, as I believe, the ductless glands are imbalanced. My selection of iodine is also logical, I think, for it plays many beneficent parts in the metabolism, especially the endocrine and lymphatic systems and, in the former, not forgetting the thyroid.

We are only just beginning to learn some of the powerful influences exerted by the ductless glands and we know of some of their exertions in bringing about metabolic changes. We also know not a few of the vicious circles (pathogenic) established in imbalanced conditions of some of these glands when they function in antagonism one to the other.

Therefore, when we weigh the history, course and symptoms of hysteria in the balance, do they not point to a disfunctional rather than to a bacterial source?

* Has anyone ascertained if there is a calcium deficiency in these cases?

Shire Horse Breeders and Farming Troubles.

The Shire Horse Society has decided to continue its increased prize schedule for the show next February, and over £1,800 has been allocated. A special committee which has been considering the financial position of the society has expressed the view that "with the present deplorable state of farming, more particularly arable farming, the fullest possible support should be extended to shire breeders so as to afford them some encouragement to continue their breeding activities until the industry itself regains some of its former prosperity and offers sufficient inducement to breeders."

Abstracts.

[**A Rare Form of Fowl Cholera ("Wattle Disease").** Csontos, J. *D.T.W.*, 1930. 38. 27. 317-321.]

This disease has been described by Australian and American writers, but the author had the opportunity of studying outbreaks in Hungary in the Autumn of 1929. The first and most striking symptom is an œdematous swelling of the wattles, this being accompanied by a bluish-red colour, increased temperature and some slight pain. The wattle increases in length as well as thickness. This swelling is due to the presence of a serous fluid. From the third day of the disease, the œdematous character of the swelling becomes less and the wattle feels firmer. This is marked at the sixth day. From now onwards the process takes on a chronic character and the wattle becomes shrivelled and wrinkled. Occasionally the wattle becomes a thin parchment-like membrane, rolled up under the beak. In some cases the wattle may become detached, whilst in others, the epidermis may be infected by an inflammatory process; incision causes the evacuation of an evil-smelling, thick, greyish-yellow material. The swelling may extend to the region of the eyes or to that of the œsophagus. Histologically, one notes, at the commencement of the disease, an increase in cells and of fluid in the subcutis of the wattle. The fluid splits up the looser connective tissue and remains there in a fluid or coagulated condition. The leucocytosis is at this time small, the cell consisting chiefly of polymorphs. In a few days the cells have increased in number whilst the œdema has decreased. The inflammatory process continues until the whole subcutal tissue and the deeper layer of the corium is converted into a homogeneous structureless mass. Still later, mummification occurs, so that only "rests" of connective tissue and blood vessels and occasional traces of cell emigration are recognisable.

The cause of this "Wattle disease" was proved to be the bacillus of fowl cholera. In five farms, fowl cholera had been eradicated prior to the appearance of the wattle infection. In 60 per cent. of cases, the bacillus could not be demonstrated in material from the wattle, and in 40 per cent. the result was positive (17 per cent. by direct culture and 83 per cent. by mouse inoculation). In the 60 per cent. negative cases, the blood serum agglutinated the bacillus of fowl cholera in a dilution of 1/400. hens, caused enlargement of this appendage, with death from fowl cholera in five instances. Five hens survived, giving the picture of the natural disease. The germ could not be re-isolated from such birds 14 days after infection.

J. H. M.

[**B. Abortus Bang Infection in Man.** Makkarvejsky, W. N., and Karadadinowsky, J. A. (*D.T.W.*, 1930. 24. 369-72).]

Of 2,544 human sera investigated (29 from private veterinary surgeons and 14 from army veterinary surgeons) 29 produced agglutination of *B. abortus* (Bang). The titres were 17=1 : 1,000, 6=1 : 200, 1=1 : 400, 1=1 : 800, 1=1 : 4,000, 2=1 : 80, and 1=1 : 20. Ten people shewed definite symptoms of undulant fever, nine being positive and one negative to the agglutination test. Three were positive and showed no symptoms. The course of the

disease in the remaining 17 reactors was not followed up. The positive agglutination in such weak dilutions as 1 : 10 to 1 : 40 hinted at the likelihood of Bang infection, unaccompanied by symptoms of undulant fever.

B. abortus (Bang) is much less pathogenic for man than *B. melitensis*. It is only on this assumption that one accounts for the relative rarity of undulant fever of bovine origin, because sources of infection are manifold. Man may be infected by drinking raw milk or handling infected cattle; six private and four army veterinary surgeons were infected in removing after-births from infected cattle.

J. H. M.

[The Transmission of Periodic Ophthalmia of Horses by means of a Filterable Agent. Woods, A. C., and Chesney, A. M. 1930 (*Journ. Exp. Med., 52,* 637.)]

This publication from the Wilmer Ophthalmological Institute and Department of Medicine of the Johns Hopkins University, Baltimore, throws light on the causation of the equine disease known as periodic ophthalmia.

In a previous communication (1929, Archives of Ophthalmology, *2*, 456) the results of a bacteriological study of the disease were reported. Both ærobic and anærobic cultures of eyes freshly enucleated from horses with both active and quiescent periodic ophthalmia, were uniformly negative. The disease, however, has been shown by others to be definitely transmissible by inoculation into a normal eye of an exudate from an eye that was the seat of active disease.

The epidemic investigated occurred in the fall of 1926 in Maryland and the experimental evidence clearly pointed to the existence in this epidemic of a filterable agent. Clinically, the disease was essentially a recurrent serous uveitis. The onset is characterised by lachrymation, œdema of the periorbital fold, slight haziness of the cornea, the occurrence of a gelatinous, mucopurulent exudate in the anterior chamber, and the usual signs of iritis with synechiæ and exudations into the vitreous. Exudates in the retina occurred, but were difficult to study on account of the disease of the anterior portions of the uvea.

The initial attack usually lasts from four to 10 days and then subsides, resulting at first in little permanent damage. The period of remission is irregular, varying usually from three to six weeks, after which a fresh attack occurs. The attacks recur one after the other with increasing or decreasing severity. In a few horses the eyes recover from the attacks and show only small vitreous opacities, occasional posterior synechiæ and varying amounts of retinal atrophy. In a few of the horses in which such recovery occurred there was almost complete retinal atrophy with resultant blindness, while in others the only evidence of the disease was limited to several vitreous opacities. The commonest outcome, however, is for the attacks to occur with increasing severity, with the formation of complete posterior annular synechiæ, secondary glaucoma, cataract and ultimately moderate phthisis bulbi.

Microscopically the characteristic lesion observed was a focal mononuclear infiltration of the uveal tract, the pigment epithelium, the retina and the optic nerve.

Experimental. Studies.—All attempts to isolate ærobic or anærobic bacteria from diseased eyes removed during the active or quiescent stages were entirely negative. The authors therefore were unable to agree with the contention of Rosenow (1927, *Jour. Amer. Vet. Med. Ass. 71*, 378. Abs. in the *Veterinary Record,* 1928, 237), that the cause of the disease is a Gram-negative flavobacterium. The possibility of a filterable agent was then considered. In the first experiment a horse in the acute stage of the disease was destroyed and the eyes removed. One of these was opened under sterile precautions, the aqueous and vitreous humours as well as the retina and uveal tract removed and ground up in a mortar with sterile sand and several cubic centimetres of physiological saline solution. The supernatant fluid was then passed through a Berkefeld N. filter, the filtrate being tested and found to be sterile by sowing it in ærobic and anærobic media; 0·5 c.c. of this filtrate was then injected into the vitreous humour of a normal horse. Within 24 hours the horse developed the clinical picture typical of periodic ophthalmia, with œdema of the periorbital fold, lachrymation, photophobia, ciliary congestion, exudation in the anterior chamber, vitreous opacities and the evidence of an acute iritis. The attack lasted only about 10 days, then subsided and recurred several times.

This experiment indicated that it was possible to recover from the eyes of horses with periodic ophthalmia a filter-passing agent which was capable of producing the clinical picture of the disease in a normal horse. Proof of the living nature of this agent was then provided by showing that it could be passed in series from a horse to rabbits and back to a horse. Starting with a Berkefeld filtrate prepared from the eye of a second natural case in a horse, six rabbits were inoculated into the vitreous. There quickly developed in these rabbits a clinical picture which, while not similar in every respect to that observed in horses, was nevertheless quite constant. There was no visible involvement of the anterior uvea, but within 24 hours there developed an acute retinitis with fluffy exudates throughout the retina. In some of the animals the lesions tended to recur after a remission of two to three weeks. Microcopically the lesions in rabbits were less extensive than those in horses.

A filtrate prepared from the eyes of these rabbits was capable of producing typical periodic ophthalmia when inoculated into the vitreous humour of a normal horse. The lesions in the experimental disease in horses were uniformly of the same character as those found in the natural disease.

In subsequent experiments involving a third natural case of the disease, the filterable agent was transmitted through a series of six rabbits in succession and, except on rare occasions, with the constant occurrence of the typical retinitis. After the sixth transfer in rabbits filtrates were still capable of producing the typical disease in two normal horses.

Control inoculations into the eyes of horses and rabbits, using filtrates from normal eyes or solutions of sterile saline gave negative results.

The experimental work set out in this publication is to be regarded as preliminary in nature. Further investigation must be carried out to obtain information on such problems as the method of natural infection, the distribution of the virus within the body and the production of immunity.

The article is accompanied by nineteen photographs illustrating the microscopic characters of the lesions in horses and rabbits.

Royal College of Veterinary Surgeons.

Quarterly Meeting of Council.

A Quarterly Meeting of Council R.C.V.S., was held on Friday, October 10th, 1930, at 10 Red Lion Square, London, W.C.1.

The following Members were present :—

Sir John M'Fadyean, President, in the Chair; Major J. Abson, Dr. O. Charnock Bradley, Lieut.-Col. J. W. Brittlebank, Professor J. B. Buxton, Mr. J. C. Coleman, Professor J. F. Craig, Major G. W. Dunkin, Professors S. H. Gaiger, F. T. G. Hobday, Messrs. R. Hughes, G. H. Livesey, G. H. Locke, J. W. McIntosh, Professor J. Macqueen, Mr. W. Nairn, Major D. S. Rabagliati, Professor J. Share-Jones, Dr. A. Leslie Sheather, Lieut.-Col. P. J. Simpson, Captain R. Simpson, Major A. Spreull, Colonel G. K. Walker, Professor A. W. Whitehouse, Mr. J. Willett, Professor G. H. Wooldridge, Captain W. G. Wragg and Lieut.-Col. T. Dunlop Young.

The minutes of the last meeting of Council, having been circulated, were taken as read and confirmed.

The Secretary read letters of apology for absence from the following: Mr. Male (on account of a very serious accident to his son), Mr. Clarkson, Mr. Trevor Spencer and Mr. John Holroyd.

Obituary.

The Registrar read the list of deaths of Members and Fellows of the College which had taken place during the preceding quarter. The list included the name of Mr. John Dunstan, who was a member of Council from 1910-1919, and a Vice-President of the College in 1911.

Professor Bradley: I should like to move that this Council expresses its sincere sorrow at the death of one of its former members. I do this because Mr. John Dunstan was a very dear friend of mine for a good many years—probably for as many years as he had been a friend of anyone in the Council. He was also for a period a colleague of mine, and I should like to express my feeling of distinct personal loss at his death. I am also convinced that the profession as a whole has also suffered a severe loss. He was a true friend, a warm friend and a generous friend, and he held the honour and dignity of the profession in the very highest esteem. I move that this Council expresses its sympathy with his relatives.

Mr. McIntosh: I should like to support all that has been said by Dr. Bradley. He was a very old friend of mine too, and a friend of this Council.

The President: I am sure we all desire to associate ourselves with what has been so feelingly said regarding Mr. John Dunstan.

The motion was carried in silence, the members upstanding.

Admissions to Membership.—The Secretary read the List of Members admitted since the previous quarterly meeting.

Correspondence.

The Secretary: Among the correspondence there are letters from the veterinary surgeons who were elected honorary associates of the College but who were unable to be present at the special meeting on August 4th to receive their diplomas. Each of the gentlemen has written expressing his grateful appreciation to the Council of this College for the high honour conferred upon him.

I have received a letter from the Secretary of the International Congress of Comparative Pathology, announcing that the second Congress will be held in Paris from October 14th to 18th next year, and making the request that the Council of this College should be instrumental in appointing a National Committee in this country to help in the organisation of the Congress and to assist in the enrolment of British members of the Congress.

Colonel Brittlebank: May I move that the heads of the research institutes in this country be constituted the National Committee to represent this country, together with the President of the College.

Professor Buxton: In that connection may I suggest that we specifically say that they have power to co-opt? My reason for doing so is that the National Committee should not be confined to members of our profession. There will be other individuals who will be forming part of any National Committee that may be formed in this country, and I think it would be rather nice if we could get them to become members of our National Committee. I therefore suggest, if I may, the addition of the words "with power to co-opt."

Colonel Brittlebank: With your permission, Sir, I will add those words.

Colonel Simpson: I will second the resolution.

The resolution was carried.

The Secretary also announced the receipt of letters from Sir John Moore, Mr. King and Mr. Sumner, thanking the Council for the resolution passed at the previous meeting on their resignation as Members of the Council.

Letters were also submitted from the Examiners thanking the Council for their re-election.

Reports of Committees.

Finance and General Purposes Committee.

Colonel Simpson read the Report of the meeting held on October 10th as follows, and moved its reception and adoption.

Lieut.-Col. P. J. Simpson was re-elected Chairman and Mr. J. W. McIntosh Vice-Chairman, for the ensuing year.

The minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

The Treasurer submitted his financial statement for the quarter showing an adverse balance of £60 9s. 6d., and liabilities amounting to £98 1s. 6d.

The Treasurer's statement was approved and he was ordered to pay the liabilities shown, together with cheques for current expenditure.

The Secretary reported that proceedings had been taken against one member for the recovery of £2 2s. annual fees and the amount, including court charges of £2 7s., had been recovered. Reports on three other cases were submitted and the Secretary was instructed as to the action to be taken.

The Secretary reported that he was not able to submit a report of the architect *re* the upper staircase, as Major Maule had not been able to pay a visit to the premises.

The Secretary reported that a further sum of £100 had been added to the capital of the Steel Memorial Fund by the investment of accumulated interest and that the capital now amounts to £800 Consols.

Colonel Brittlebank seconded the motion, which was carried.

Examination Committee.

Professor Buxton read the following Report of the meeting held on October 8th and moved its reception and adoption.

Professor Buxton was re-appointed Chairman and Mr. J. Clarkson Vice-Chairman of this Committee for the ensuing year.

The minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

A letter was received from the Registrar of the General Medical Council with regard to the preliminary educational examination held by the Royal College of Physicians and Surgeons in Ireland, promising a further communication on the matter as soon as possible.

The reports of the Chairman of the Board of Examiners, the Local Secretaries, and Delegates of the Council, on the membership examinations held in July were submitted, together with explanations from the Examiners in Surgery regarding comments by one of the Delegates. It was resolved :—" That the thanks of the Council be expressed to those persons and institutions by whom assistance had been rendered in the conduct of the examinations."

Educational certificates numbers 3523-3553, 3555-3570, 3572-3579, 3581-3584, 3591-3601, 3603-3616, were submitted and approved.

Exemptions from the provisions of Byelaw 62 were granted in the case of candidates Nos. 3554, 3585, 3586, 3588, 3589, 3590 and 3610, and exemption under Byelaw 95 was granted in the case No. 3587, Muir, G. S., B.V.Sc., Ontario Veterinary College, 1928.

Applications were received from Miss A. B. Peterkin and Mr. H. V. Ellison for admission to the veterinary course on the special ground of war service, the candidates not possessing the required educational certificates. The applications were not acceded to.

An application from Mr. M. A. Ahmad for his examination fee, paid in July, to be held over until the December examinations, on the ground that he was absent from the July examinations owing to illness, was agreed to.

An application from Mr. M. Ahmad, rejected at the July examination, for permission to pass to Class C and to take the required subjects at the December examinations, was not acceded to.

An application from Mr. J. H. L. Cloete for a concession in respect of examinations passed during his course at the Faculty of Veterinary Science, Pretoria, was considered. Exemption was granted to Mr. J. H. L. Cloete under the provisions of Byelaw 62 in respect of his having passed the first B.V.Sc. examination of the Faculty of Veterinary Science, Pretoria, in Physics, Chemistry. Botany, and Zoology.

An application was received from the Director of the Egyptian Educational Mission for the recognition of the Diploma of the School of Veterinary Medicine, Giza, under the provision of Byelaw 95. Consideration of the matter was deferred pending the receipt of information as to the curriculum.

An application was received for the recognition of the Wye College as a teaching centre for the subjects required for Examination " A." The Secretary was instructed to reply that students of the Wye College who produce evidence of having passed the first B.Sc. examination of the University of London in the subjects of Chemistry, Physics, and Biology, will be entitled to exemption from the first year's course under Byelaw 62.

A request was submitted by a member of the College that the Council should draw up a syllabus of instruction in Animal Husbandry for the guidance of veterinary surgeons who are called upon to teach agricultural students. The Secretary was instructed to reply that the matter is outside the province of the Council.

Applications were received from six rejected students for a special examination to be arranged for the D.V.S.M. in December next. The matter was left in the hands of the President and Chairman.

Prizes.

The report of the Auditor on the number of marks gained by students eligible for the Fitzwygram Prize, 1930, was submitted, showing that the students gaining the highest and second highest number of marks were: Mr. W. G. Robinson (Edinburgh), 698 marks, Mr. J. J. Davies (London), 669 marks.

It was resolved " That the first and second Fitzwygram Prizes for 1930 be awarded respectively to Mr. W. G. Robinson, a student of the Royal (Dick) Veterinary College, Edinburgh; and Mr. J. J. Davies, a student of the Royal Veterinary College, London."

The report of the Auditors on the number of marks gained by students at the Written Examinations in Pathology, Materia Medica, and Hygiene, in December, 1929, and July, 1930, was submitted, showing that the student gaining the highest number of marks was Mr. J. G. Crowhurst (London), 106 marks. It was resolvel " That the Walley Memorial Prize for 1930 be awarded to Mr. J. G. Crowhurst, a student of the Royal Veterinary College, London."

It was resolved to recommend that Mr. A. K. Cameron, Mr. A. Renfrew, Mr. W. Nightingale, and Mr. J. Doyle be re-appointed as Local Secretaries for Examinations for Edinburgh, Glasgow, Liverpool and Dublin respectively, at the same salary as heretofore.

It was resolved to recommend that Mr. F. T. Harvey be re-appointed examiner in Medicine, Class D, and Colonel A. G. Todd and Dr. G. Lapage be appointed examiners in Hygiene and Biology respectively.

Mr. Hughes seconded the motion, which was carried.

Special Examination Committee.

Professor Buxton read the following Report of the meeting held on October 9th, and moved its reception and adoption, which was carried.

The minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

The decision of the Council at its previous meeting, relative to the revision of the curriculum, was reported. The relation of the proposed order of examinations to the draft syllabus was considered, and it was resolved :—

(*a*) That the members of this Committee be invited to express their considered views in writing on both the teaching and examination syllabuses and that their communications be submitted to a small Sub-Committee, for consideration and report to this Committee at its next meeting.

(*b*) That the Sub-Committee be constituted as follows: Dr. O. Charnock Bradley, Lieut.-Col. J. W. Brittlebank, Professor J. F. Craig, Professor S. H. Gaiger, Professor J. Macqueen, Dr. J. Share-Jones, Colonel G. K. Walker, Dr. A. W. Whitehouse, Professor G. H. Wooldridge.

The question whether provision should be made, in the case of a student failing in one subject only, permitting him to pass to the next year's course conditional on his taking the required subject at a subsequent examination, was considered. It was resolved :—

(*a*) That the principle of allowing exemption from re-examination in certain subjects be approved.

(*b*) That the matter be referred to the Special Sub-Committee appointed in paragraph II (*b*), for consideration and report.

Five Years' Course.

It was resolved to recommend " That the date of the commencement of the five years' course be fixed as October, 1932."

The following lists of Schedules to the Examination Syllabus were submitted :—

(*a*) Important Forage Plants, and Common Poisonous and Medicinal Plants.

(*b*) Principal Breeds of Livestock.

Progress was made with the revision of these lists, and their consideration was adjourned to the next meeting.

Registration Committee.

The Secretary read the following Report of the meeting held on Wednesday, October 8th.

The minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

Cases.

No. 2074. P.D.S.A. Correspondence was submitted, and the case was ordered to stand over.

No. 2272. Practising as "Veterinary Chemist." The solicitor reported that he had received suitable evidence in this case but that as it was out of date he could not act upon it. The case was therefore ordered to stand over.

N.26, Hodgkinson, P. H. "Hon. Veterinary Surgeon" at Dog Show. The Secretary reported that he had received acknowledgment of his letters from the Kennel Club and the Ladies' Kennel Association, and the case was ordered to stand over until the next meeting.

N.27, Tomlinson, M. "S.R.V.C., C.F.S., M.C.N.I. Animals Home and Hospital. Sick Dogs and Cats Visited at own Homes." In the absence of further evidence this case was struck out

N.30, Coveney, W. Junr., "Veterinary Surgeon" in Local Directory. In the absence of further evidence this case was struck out.

N.32, Moonan, J. A. "Qualified Veterinary Chemist." A satisfactory undertaking was received in this case.

N.33. "Canine and Feline Specialist." It was resolved:—

That the case be held over for further evidence.

N.34, Stroud, A. H. Name removed. Using Title. The action taken by the Secretary in this case was approved.

No. 2084. A member appeared in answer to the charge of employing an unqualified assistant in contravention of the provisions of Byelaw 53 (3). The member was represented by his solicitor, and admitted that he employed an unregistered person, as assistant.

After hearing the solicitor on behalf of the member, the parties were asked to withdraw.

After consideration it was resolved "That the Committee find that the member employed an unqualified assistant in a manner that constitutes a breach of Byelaw 53 (3) in that it is "the doing of an act whereby an unregistered person may practise as a veterinary surgeon."

Correspondence was submitted and the Secretary was instructed as to the replies to be sent.

The President moved the reception and adoption of the report.

Mr. Livesey: I should like to discuss some matters in reference to this Report, and, if I may be allowed to do so, I move that the Council go into Committee to hear me.

Professor Buxton: I second that.

The President: Is it your wish that we now resolve ourselves into committee to allow discussion on this Report?

Agreed.

The Council then resolved itself into Committee.

On resuming its sitting as Council, the Report, with a verbal amendment, was carried, and it was further resolved that in case No. 2084 the judgment of the Council be postponed for three months, and that the member be informed that he must discontinue the offence of covering forthwith.

The Secretary then read the following Report of a second meeting of the Registration Committee held on Thursday, October 9th.

The minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

Cases.

2430. Use of word "London" after M.R.C.V.S. Use of Title "Canine Specialist." The Secretary was instructed to require an undertaking from this member to discontinue the use of the words specified.

2439. A member appeared in answer to a charge of breach of Byelaw 53 (3) in that he had employed an unqualified assistant to act for him in the veterinary examination of dogs at shows. The member was represented by Counsel, who explained the circumstances under which the unqualified assistant was employed. Before answering questions on behalf of the member, he stated that if the Council considered that what had occurred was a breach of the Byelaw, the member was quite prepared to give an undertaking that it should be discontinued.

After answering questions put through the Chair, the parties were asked to withdraw.

It was resolved "That the explanation and undertaking be accepted and that the President be requested to express the Committee's appreciation of the way in which Counsel had submitted his case, and to accept his undertaking on behalf of the member that there would be no repetition of the circumstances which led to this inquiry."

The parties were then re-introduced and the President addressed them as directed, after which the parties withdrew.

2442. Advertising on billheads. A satisfactory undertaking was received in this case.

2444. An undertaking submitted through the Secretary was accepted.

2445. Alleged supersession. A further communication was received from the complainant in this case and the Secretary was instructed to inform him that the Council had arrived at their decision after full consideration of the evidence placed before them and that they have nothing further to add.

2448. The Secretary reported that the evidence in this case was lacking, and the case was struck out.

2449. Eve, H. B. Convicted on an indictment of criminal negligence and sentenced to 12 months hard labour. It was resolved "That this member be called upon to appear before the Committee to show cause why his name should not be removed from the Register under provisions of Section 6 of the Veterinary Surgeons Act, 1881."

2450. Advertising. A satisfactory explanation was received.

2451. Alleged covering. It was resolved that there was no case on the evidence submitted.

2453. Advertising. An explanation was received from this member and the Secretary was instructed to ascertain whether the undertaking asked for had been carried out.

2454. Alleged cruelty. It was resolved that there was no cause for action by the Committee.

2455. (1) Advertising on blacksmith's shop. A satisfactory explanation was received. (2) Alleged touting. The consideration of this charge was deferred pending the receipt of further evidence. (3) Conduct in relation to purchase of practice. The consideration of this question was deferred for further enquiry.

2457 and 2460. Reports of the conviction of these members on the charge of being drunk and disorderly were received and the Secretary was instructed to address to these members the usual letter of warning.

2459. Conduct. This case was ordered to stand over for further enquiry, the President being authorised to direct the member to appear before the next meeting, if necessary.

2461. Advertising. It was resolved that there was no case.

The Secretary reported that no reply had yet been received from the Royal Society for the Prevention of Cruelty to Animals with regard to the proposed scheme for free veterinary treatment.

The President: I move the reception and adoption of the report.

The Report with verbal amendments was agreed to.

Parliamentary Committee.

The Secretary read the Report of the meeting held on October 9th.

Lieut.-Col. J. W. Brittlebank was re-appointed Chairman and Dr. J. Share-Jones Vice-Chairman of this Committee for the ensuing year.

The minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

Concerning the Irish Free State, the Secretary reported communications from the Dominions Office to the effect that it was hoped that the draft agreement as revised would shortly be signed.

The President and Chairman were authorised to continue negotiations on this matter with power to act.

A letter addressed by the Council to the Ministry of Agriculture regarding the appointment of Veterinary

Advisory Officers was submitted, together with a reply received from the Ministry of Agriculture.

It was left to the Special Sub-Committee to draw up and transmit a reply to the Ministry of Agriculture.

A letter was received from the Clerk to the Wiltshire County Council with regard to the terms of appointment of the County Veterinary Inspector. It was resolved that no action be taken.

A letter was received from the Elephant & Castle Horse Repository with regard to the possibility of a ban being placed on the use of horses in London streets. The Secretary was instructed as to the reply to be sent.

An enquiry was received from the R.S.P.C.A. on the question of the poisoning of animals by prussic acid, and it was resolved that the reply be left in the hands of the President and Chairman.

The following resolution was submitted for the consideration of the Committee by the Mid-West and South Wales Division of the N.V.M.A.

> "That this Association is of opinion that the time has arrived when legislative measures should be introduced making it illegal for any person or persons other than fully qualified veterinary surgeons, to administer active biological products to animals."

The Secretary was instructed to inform the Division that while the Council are in entire sympathy with the resolution submitted, they see no prospect of any suitable legislation being carried in this country within a reasonable time.

The formation was reported of an Agricultural Research Council, whose duties would include the consideration of Diseases of Animals. The matter was left in the hands of the President and Chairman, with power to take such action as they may think desirable in the interests of the profession.

The President: In the absence of the Chairman of the Committee, I will move that the Report be received and adopted.

Colonel Young: With regard to the use of active biological products; does that debar a medical man from their use, because if so we are going to have serious opposition from the medical profession, and there will be more bad blood created between our profession and their's than ever before. It is confined entirely to veterinary surgeons.

The President: If there is no further discussion, I will put the motion for the adoption of the Report.

The motion was carried.

Joint Meeting of Examination and Parliamentary Committees.

Professor Buxton read the following Report of the meeting, held on October 8th, and moved its reception and adoption.

The Minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

Practical Instruction.

In accordance with the instructions of the Joint Meeting held in July last, the Secretary submitted draft amendments to Byelaws for the purpose of providing that students shall have received satisfactory practical instruction prior to the final examination. After discussion, it was resolved:—

(*a*) That the Members of Council who are heads of the affiliated Veterinary Schools be appointed a Sub-Committee with a request to draft a scheme to secure that veterinary students shall have proper facilities provided for seeing as many cases of sick animals as possible, prior to the final examination, and to present the draft scheme to the Committee at its next meeting.

(*b*) That the letter conveying this request to the members of the Sub-Committee be drafted by the President and Chairman.

Colonel Simpson seconded the motion, which was carried.

Library and Publication Commmitee.

Mr. Livesey read the following Report of the meeting, held on October 10th, and moved its reception and adoption.

Mr. G. H. Livesey was re-appointed Chairman, and Mr. J. C. Coleman Vice-Chairman of this Committee for the ensuing year.

The Minutes of the previous meeting, having been printed and circulated, were taken as read and signed as correct.

The Librarian submitted a report on the work of the Quarter, which was approved.

A list of presentations of books, pamphlets, and periodicals was submitted, and the Librarian was instructed to express the thanks of the Committee to the respective donors.

A number of volumes of textbooks and journals was presented by Major J. H. Wright to the Library as a mark of appreciation for the valuable services rendered to the City of Manchester by his colleague, Colonel Brittlebank. It was resolved "That the cordial thanks of the Committee be sent to Major Wright for his very acceptable gift."

It was agreed to purchase for the Library the Medical Research Council Report on Deficiency Diseases (Mellanby), and Veterinary Counterpractice.

The Chairman, Dr. Sheather, and Colonel Walker presented their report on the Conference of Special Libraries and Information Bureaux held at Oxford from September 20th-23rd, which was approved.

The question of the nature of the advertisements to be published in the Register of 1931 was considered, and it resolved "That no objection be raised to the acceptance of an inset advertisement, but that the copy for all advertisements be submitted to the Committee for approval at its next meeting."

A suggestion that the telephone number of members should be inserted in the Register was considered, but not agreed to. The Secretary was, however, instructed to insert wherever possible the telephone numbers of Veterinary Institutions.

The Registrar was instructed to insert a list of officers of the Colonial Services in the Register.

Dr. Sheather submitted specimen number labels for the book shelves, and it was agreed that ivorine labels be provided for the book shelves at a cost not exceeding 21s.

The Report was adopted.

Appointment of Local Secretaries for Examinations.

Professor Buxton: I beg to move that Messrs. A. K. Cameron, R. Renfrew, W. Nightingale, and J. Doyle be re-appointed local secretaries for examinations at Edinburgh, Glasgow, Liverpool and Dublin respectively.

Major Abson: I second that.

The motion was carried.

Notices of Motion.

Professor Buxton gave notice of certain amendments to Byelaws.

The President: That concludes the business of the Quarterly meeting.

Special Meeting of Council.

The minutes of the previous special meeting of Council, having been circulated, were taken as read and confirmed.

The Secretary: Colonel Brittlebank, Chairman of the Special Sub-Committee which drew up the draft Standing Orders, wishes me to inform you, Sir, that the draft Standing Orders are found to require further consideration, and it would therefore be very much better to defer their adoption in the meantime.

The President: The proposal is that consideration of the Standing Orders on Procedure be deferred to the next meeting.

This was agreed.

N.V.M.A. Divisional Reports.

Midland Counties Division.*

Principal Hobday on "The Cinema as an Aid to Veterinary Education."

The Quarterly Meeting of the Midland Division, N.V.M.A., was held at the Medical Hall, Edmund Street, Birmingham, on Thursday, September 25th, the President (Mr. H. Tudor Hughes, of Oswestry) being in the chair. There were also present Professor Hobday, Messrs. W. H. Brooke, W. C. Blackwell, H. B. Hiles, H. W. Steele-Bodger, H. V. Tyerman, S. M. Woodward, L. W. Heelis, T. N. Gold, Colonel Marriott, J. Martin, L. C. Tipper, C. Renfrew, E. O'Neill, W. White, W. T. Olver, J. R. Barker, G. K. Miles, J. Robertson, B. De Vine, C. G. Allen, A. A. Forsyth, W. F. Aston, E. Wilkinson, G. F. Banham, J. Scott, R. H. Over, H. E. Powell, H. W. Yeomans, H. W. Dawes, T. Martin, J. A. McLaughlan and the Hon. Secretary (Mr. H. J. Dawes). Visitors included Alderman Lucas, Colonel Lowe, Messrs. E. A. Comer and W. S. Davison.

Apologies for absence were received from Sir Gilbert Barling, Sir John M'Fadyean, Professor Macqueen, Messrs. F. L. Gooch, M. T. Sadler, E. Ringer, L. C. Maguire, G. H. Leader, H. Burrow, J. J. Burchnall, H. S. Caldwell, M. Tailby, R. Hughes, J. Whyte, J. E. Hutchinson, W. E. Ison, R. L. Phillips, A. W. Findlay, T. H. Hobson, J. T. Brain, E. Hall, H. S. Cockburn, A. B. Forsyth, C. J. Clifford, H. S. Reynolds, W. W. Grasby, O. V. Gunning, P. M. Evershed, R. Lake, C. J. Peach, W. J. Dale and P. D. Bayliss.

Nominations and Elections.—Colonel W. C. Lowe, of Eccleshall; Mr. A. B. Fewings, of the Ministry of Agriculture; Mr. E. A. Comer and Mr. W. S. Davison, of the City of Birmingham Veterinary Department, were nominated for membership.

The following gentlemen, duly nominated at the previous meeting, were now formally elected members of the Division: Mr. W. F. Wilson (Hodnet, Market Drayton), Mr. A. B. Over (Rugby) and Mr. M. L. Dartnell (Cheltenham).

Vote of Condolence.—The President said that since their last meeting they had lost two old and esteemed members by death. He referred to Mr. J. A. R. Jones, of Gloucester, and Mr. A. Renfrew, of Broadway. He moved a resolution of sympathy with the bereaved families, to whom he requested the Secretary to send a letter in the name of the Division.

This was duly agreed to.

A "National" Appeal.—The Hon. Secretary read a letter from the National Veterinary Medical Association appealing for additional members, and suggesting that committees be formed in each division with the idea of inducing members of the profession to join.

Mr. Dawes added that he was in full agreement with the idea. The stronger the N.V.M.A. was in point of numbers, the more powerful it would be, and the better able to protect the interests of the profession. He moved that such a committee be formed.

The President, in seconding, said the security of the profession depended upon a strong national body.

The resolution was carried, and a committee was appointed, consisting of the President for the time being, the Hon. Treasurer and the Hon. Secretary.

Arrangements for Next Meeting.—The Hon. Secretary presented the report of the Council, recommending that the next meeting of the Division be held at Shrewsbury, on Friday, November 28th; that Mr. Hugh Begg, chief veterinary officer for Lanarkshire, be asked to read a paper on the duties of a veterinary inspector under the Milk and Dairies Order and the Tuberculosis Order, including differential diagnosis and the application of the tuberculin test in its concentrated form; and that invitations to be present be extended to the local medical officers of health, the chairmen of county councils and executive committees, and also to the principal of the Harper-Adams College.

Mr. H. W. Dawes said he would like to suggest that Mr. Begg be asked to lay special stress on the interpretation of the results of the intradermal test.

The Council's report was adopted, together with the further recommendation that a congratulatory letter be sent to Alderman Neal, the Lord Mayor-elect of London, on the high honour to be bestowed upon him.

International Veterinary Congress.—The President now gave his report as delegate to the recent International Veterinary Congress.

Mr. Steel Bodger moved a vote of thanks to the President for his report.

The motion was seconded by Mr. Tipper and carried.

Two Interesting Cases.

Mr. Hiles exhibited part of the radius of a four-year-old gelding. A swelling came on the knee, but the animal was able to work. In eighteen months time, it was so bad that the owner had the horse destroyed. They would see from the specimen that a bad case of tuberculosis in the bone was revealed.

Mr. Hiles next displayed part of the lumbar vertebræ of a thoroughbred. The animal stumbled on landing in a point-to-point race. It finished the course, but was then found to be hurt. It was insured for £500 and the company compromised by paying half. An examination of the bone did not disclose any fracture.

"The Cinema as an Aid to Veterinary Education."

Principal F. T. G. Hobday, of the Royal Veterinary College, London, now demonstrated a number of films from the College Film Library, prefacing the exhibition with the following remarks:—

Some thirty years ago the Midland Veterinary Association did me the honour to elect me as an Honorary Member; and, as a Midland man by birth, I appreciated the honour very highly. I recollect that I promised the then Secretary, Mr. Malcolm, that when I had anything to bring forward which was likely to be of interest to the progress of the profession, I would lay it in front of your Society for your criticism and judgment. A practical demonstration of the Ventricle Stripping Operation for Roaring in horses, then in its cruder stages, was one of the earlier results of this promise; and in connection with this it will interest you to know that the first application

* Received on October 13th, 1930.

of the surgical technique of this operation for the relief of vocal cord paralysis in human patients was made by a Birmingham surgeon, Mr. Musgrave Woodman—a proof that collaboration between the human and the veterinary branches of medicine can be made as valuable in surgery as in other branches of science.

To-day I come before you with the results of the work which has recently been done by the cinema as an aid to veterinary education. That it is an aid, and a very valuable aid too, not only to the student but also to the practitioner, will, I feel sure, be your unanimous opinion after you have seen what I am about to show you to-day.

All education means progress, and veterinary education must not lag behind. Students vary in their powers of receptivity and their method of absorption of knowledge, and veterinary students are no exception to this statement. For the teaching of veterinary science the cinema occupies an especially useful place and fills a long-felt want. Some students learn from lectures and some remember things better when they are put before them in a practical manner. Both these types of brain have to be catered for, but in the veterinary student one has the *practical* element more to the fore than in any other branch of science, because the ultimate aim of all one's teaching is to try to show him (or her nowadays) how to collate the symptoms shown by the patient into concrete form, so that the necessary deductions may be made to diagnose the ailment. To have seen a similar case before is of inestimable value; but in the comparatively short period of College study it is not possible to see even one case of every disease; and this is where the cinema finds its useful place.

The cost of the equipment necessary to take the films, and afterwards to project them on the screen, amounts to about £85; and the benefit conferred on both lecturer and student is incalculable. Although some students learn well from the notes they take down in their lectures, others find this is very tedious—but all can learn from pictures, and, when told to describe what they have seen in their own language, they will do so in a way which they will never forget. In other words, the details of an illustrated operation are much more easy to remember and to conjure up again at a later date, when the subject matter is questioned about. From the lecturer's point of view the value of illustrations is obvious, even if only because it makes it easier to keep the attention of the class; but the cinema illustrations have the advantage over both the epidiascope and the lantern, that the picture is a moving one and is as near the real thing as it is possible to get—being, too, always available, so that one can demonstrate the actual operation or actual case at the actual time when the lecturer is discoursing upon the subject.

Although we only had the opportunity given to us a few months ago, we have now accumulated quite a nice selection of films, which we are prepared to exchange with other British, Colonial or Foreign Schools, and some of which we were told by a number of our Continental *confrères,* who visited the old College, during the International Congress Week, were unique, in that even they did not possess them in their well-equipped and Government-aided Schools.

We are always collecting something fresh, and to-day I am able to show you some of the films we use for teaching purposes.

Most of these have, as in the case of all cinema shows, the description attached, but where this is only brief or rudimentary it is intended that the lecturer shall have the opportunity to give explanations—and these I will endeavour to interpose. Now, without further preamble, I will ask Mr. Southern, who has been my chief assistant in taking and arranging the films, to put on the first reel. I should like to mention here that it is by his good offices that the Kodak Company have very kindly lent us to-day, specially for this meeting, one of their latest pattern of projector, by which it is possible not only to demonstrate slow motion, or stop at any given point, but to reverse the action of the patient on the film, so that the animal can be made to run backwards as well as forwards—or a lecturer may return if he wishes to emphasise to his students any given point of importance which he may think fit.

It is a most uncanny sight, the first time one sees it, to observe on the cinema the process of making a surgical incision into a cavity such as the abdomen, with the subsequent withdrawal and examination of the intestine or other abdominal contents, and the subsequent picture when the film wheels are reversed. The whole procedure of the operation is reversed, the abdominal contents become replaced, the incision closes and the patient's skin becomes whole again without trace of a scar.

I will now show you some of these things.

Vote of Thanks.—At the close of the demonstration the President moved a vote of thanks to Professor Hobday, and said that that had been one of the most interesting meetings he remembered.

The Hon. Secretary seconded, and the resolution was heartily carried.

Professor Hobday, in acknowledgment, said the pleasure had been his. They had seen the value of the films to the student, by the slow motion. They were getting quite a number of films. In their thanks he would ask them to include the operator, Mr. P. W. Southern, who had taken a great deal of trouble in preparing for that meeting.

The company now adjourned to the Grand Hotel, Birmingham, for tea.

H. J. Dawes, *Hon. Secretary.*

Lincolnshire and District Division.

Royal Veterinary College Films at Lincoln.

Initiated by the Principal of the Royal Veterinary College, London, primarily as a graphic and enjoyable means of supplementing tuition, the exhibition of cinematograph films illustrative of pathological conditions and operative procedure in animals is fulfilling a most useful and widely appreciatel secondary function in providing an attractive programme for veterinary society meetings. The ready acquiescence of Principal Hobday and his staff (Professor McCunn should be specially mentioned), at no little inconvenience to themselves, to comply with the requests of the secretaries of Divisions of the N.V.M.A. in this connection, is evidence of their desire that the fullest possible use should be made of the Royal Veterinary College Film Library, and it must be a great source of satisfaction to them to know that such is the popularity

of their films, even in these, their pioneer, days that a Divisional Secretary who is fortunate enough to secure them is assured of an outstandingly successful meeting.

Certainly to the members of the Lincolnshire and District Division assembled at Lincoln on Thursday, October 9th, the advent of Professor James McCunn with the College Kodascope and Mr. Southern as operator, was a memorable event, in particular as they were privileged to witness the most extensive and up-to-date veterinary picture show yet given in this country. One of the most interesting and informative of the films—that showing the performance of metrectomy with Professor McCunn as operator—had, indeed, only been secured on the preceding Thursday, and represented an innovation in that it was the first to be taken throughout by artificial light. The success of the experiment was complete, the photography being remarkably good, and the process of preparing the picture for reproduction was successfully hurried through in time for the meeting. The film formed part of what was almost a full length matinée programme, and those who remember the first essay of the kind (at the meeting of the South Eastern Division held last year at the Royal Veterinary College), when the earliest pictures created such interest and enthusiasm, will appreciate the immense improvement in technique which has been effected since " those early days," which yet are so recent.

The President of the Division (Mr. E. Porter-Smith), extended a cordial welcome to Professor McCunn, adding that he was very pleased to see that, although the membership of that little association was very limited, they had a good assembly—a fact which would show Professor McCunn how greatly they appreciated the effort he had made in coming amongst them that day. (Applause.) It was just the spoken word that made all the difference; it was by no means so satisfactory merely to see films of professional subjects, or to read articles on them: the verbal explanation of the points shown in the pictures would greatly enhance the value of the most useful information they contained, and facilitate its retention in the memory.

Professor McCunn, who was received with applause, said that, as they knew, they had been using that cinema for practically a year now. Their idea had been to exhibit on the screen certain things that they could not show with the same facility in the living animal: to show to students typical cases of varying conditions and, by repetition, to instil a mental picture of those conditions. A great advantage of cinematographic demonstration was the fact that one could see the details so clearly; moreover, instead of the conditions prevailing at the ordinary demonstration, where everyone was standing in everyone else's way and line of vision, with the film it was as though the demonstration was being given for one's own particular benefit.

At present they were really in the infancy of the cinema, as applied to veterinary science and tuition, but his audience would probably agree that it had a great educational value. (Hear, hear.) They had an assortment of films. One depicted various kinds of lameness, they had three operations to show them, and also a variety of clinical cases.

The first film, now exhibited, depicted various types of lameness, every abnormality of stance and progression being clearly revealed. Most striking, perhaps, was the improvement disclosed in a subject of chronic laminitis as the result of being shod with a modified Blenkinsop shoe. The effect of the application of remedial measures—such as median and plantar neurectomy for the removal of fore ringbone lameness—was, indeed, a valuable addition to the revelation of the defects themselves. Cases of sprained fetlock, strained check ligament, arthritic hip, shivering, stringhalt, extensor paralysis, rupture of the flexor metatarsi, fractured pelvis, nail-bind lameness and curb, followed each other in informative succession, the film concluding with some examples of lameness in the dog. Of the last, it was interesting literally to see the gradual disappearance of post-distemper paralysis under appropriate treatment, a case of fracture of the tibia reunited by pyro-puncture, performed by Mr. Holmes, of the Royal Veterinary College, and one of compound fracture of the femur in a greyhound which is now running well in trials after no more drastic treatment than the application of massage—Professorf McCunn's favourite method of dealing with fractured limbs of dogs.

The excellent picture of the cryptorchid operation, performed by Professor Hobday, and previously described in the *Record*, followed, and then came that most informative film " Some Clinical Cases " which, in common with the " Lamenesses " picture, has undergone considerable extension since its first exhibition. The respiratory indications in horses suffering from pleuro-pneumonia and broken wind were shown most effectively, succeeded by our old canine friends the subjects of rachitis and chorea. Next, a decrepit eczematous Airedale crept across the screen, to be seen clean-coated and vigorous after the performance of the Steinach rejuvenation operation. A depiction of the successful treatment of a canine victim of tuberculous pleurisy by titanium ray preceded the excellent film showing Principal Hobday performing his ventricle stripping operation for the relief of roaring.

Another picture detailed an eminent human surgeon—Humphrey Neame—operating upon a horse's eye by the insertion of radium-ray emanation needles in an attempt to deal with a carcinomatous growth. The animal made a good recovery and only a slight scar remains.

What appeared to be an unwitting reminder of the expense of film production was furnished by the next picture, in which a colt by no means adequately chloroformed in the standing position was the subject of castration. Moreover, the clumsy, carving efforts of the student operator to open the scrotum provide an additional reason why this film might well be replaced by one more worthy of the series, and less likely to mislead the student—and possibly, some potential subscriber to the College funds.

The metrectomy film completely restored enthusiasm, and concluded an admirable display. The artificial lighting may be—indeed, undoubtedly is—detrimental to the operator, particularly in the matter of handling suture material, but furnishes a brilliant " close-up " of the operative field. The subject was a Sealyham, with a pus-filled uterus. The method of keeping the anæsthetised bitch in position by the use of small sandbags wrapped in cotton-wool was both ingenious and effective. The incision made by the operator (Professor McCunn) was surrounded by sterile cloths, on to which the distended body and horns of the uterus were

withdrawn. The technique of the processes of ligaturing the uterine arteries, severing the uterus, cauterising and ligaturing the uterine stump and burying it beneath a portion of omentum was clearly depicted, as was the suturing of the peritoneum with a continuous (over and under) suture and that of the skin with silk-worm gut.

At the conclusion of the film programme, the President voiced the opinion of all present when he described the pictures they had seen as fascinating. The members of the Lincolnshire Division had, indeed, thoroughly enjoyed the treat Professor McCunn had given them, and he was sure that his efforts in journeying so far for their benefit were immensely appreciated by everyone present. (Applause.)

Mr. W. W. Lang, in proposing a very hearty vote of thanks to Dr. McCunn, said that what they had seen and heard that afternoon, was both entertainment and instruction of the first quality. (Hear, hear.) There was no doubt that what they had seen that day compared more than favourably in many respects with the holding of demonstrations. As Dr. McCunn had said, at the latter there was usually far too big a crowd for everyone present to see properly what was going on. He thought they owed a great debt of gratitude to Dr. McCunn and his helper, Mr. Southern, for their visit. (Applause.)

Mr. T. Hicks, in seconding, observed that Professor McCunn had given the members of the Division an afternoon of great enjoyment. The film programme had been most instructive, and, as Mr. Lang had said, considerably more effective than a programme of demonstrations. One could see what was being done. The cinema must be a great boon to the veterinary colleges, because the student did not have the opportunity of witnessing the things that were seen by men in practice—and then the latter sometimes suffered from lack of opportunity. When the practitioner looked back at his student days he remembered how he used to wonder how he would describe or "spot" certain lamenesses, and all had been in practice several years before they could say that they had acquired any degree of confidence or proficiency. The present-day student, thanks to the cinema, had a great advantage in that respect. (Hear, hear.)

The vote of thanks was carried with acclamation.

Professor McCunn, in acknowledgment, on behalf of Mr. Southern and himself, thanked the members cordially for their vote of thanks. Most of the credit for the exhibition of veterinary films should, however, be given to Principal Hobday, because it was by reason of his initiative and energy that they were brought into being, and had reached such a degree of excellence as they could justly claim they had attained at the present time. (Applause.)

Other Business.

The afternoon also witnessed the transaction of a little routine business. The Minutes of the previous meeting, which had been published in the *Record*, were taken as read and were confirmed and signed, on the proposition of Mr. W. Lang, seconded by Mr. F. L. Gooch.

The receipt of apologies for unavoidable absence was announced from Mr. W. A. Dickinson, Mr. G. Eaton, Principal F. T. G. Hobday, Messrs. J. H. Poles, H. C. Reeks, sen., H. P. Standley, and C. W. Townsend.

N.V.M.A. Congress Provisional Committee.—The Hon. Secretary announced that, since the last meeting, the Division had been asked to nominate members to serve on the Provisional Committee of the 1931 Congress of the National Veterinary Medical Association, to be held at Norwich, and that Messrs. Knowles, Runciman, Townsend and Truman had been asked to represent the Lincolnshire and District Division on that committee.

The action of the Hon. Secretary in the matter was approved, and the nominations were confirmed, on the proposition of Mr. Gooch, seconded by Mr. Hines. In moving, Mr. Gooch informed the members that, at a meeting of the Council of the N.V.M.A., held in London on the preceding Tuesday, the gentlemen concerned had been unanimously elected to the Provisional Committee, in association with 20 other gentlemen nominated by their considerably larger neigbouring Division, the Eastern Counties V.M.A.

Proceeding, Mr. Gooch said that he thought that their Division would be called upon to pay their ratio of the expenses of one of the social outings in connection with the Congress—probably those of a trip to the Norfolk Broads—and it was for the meeting to consider whether that charge should be met out of the somewhat limited financial resources of the Division or by individual donation.

After discussion, the latter course was agreed upon, several members promising donations.

New Members: Election as members of the Division was unanimously made of Mr. W. S. Cartwright, of Grimsby, and Captain S. Littler, of Newark, while Captain K. J. S. Dowland, who has succeeded the late Major Charles Hartley in practice at Lincoln, was nominated for membership.

In making Captain Dowland's nomination, the President extended a cordial welcome to one who, he was sure, would be a valuable acquisition, as would the gentlemen elected that day, to the ranks of the society. Captain Dowland had come to them from the Punjab Veterinary College, Lahore, where he had officiated as Professor of Sanitary Science.

The votes of thanks passed at the conclusion of Professor McCunn's demonstration included a tribute to the President for his conduct of the proceedings, following the termination of which the members took tea together at his invitation. Those present at what was universally agreed to be one of the most interesting and successful gatherings held by the Lincolnshire and District N.V.M.A. in recent years were: Messrs. E. Porter-Smith (President), R. Hudson (Hon. Associate), W. S. Cartwright, F. L. Gooch, T. Hicks, A. J. Hines, Captain W. W. Lang, Captain S. Littler, Mr. G. Lockwood, Captain A. Logan, Mr. R. Swaby, Mr. R. W. Watchorn and Mr. H. C. Reeks, jun. (Hon. Secretary), together with the following visitors: Professor James McCunn, Captain E. F. Angler, Mr. J. S. S. Woodrow and Mr. Southern.

H. C. Reeks, *Hon. Secretary.*

As some doubts have arisen as to the Order permitting serum treatment of cattle which have been exposed to foot-and-mouth disease infection, it may be repeated that it is intended to use this power only in a few selected cases for experimental purposes. Animals so treated will be kept in strict isolation. The general policy of slaughter will, of course, remain.

Report.

Royal (Dick) Veterinary College, Edinburgh.

The Annual Report of the Royal (Dick) Veterinary College, Edinburgh, shows a steady increase in the number of students attending courses of instruction for both the Diploma of M.R.C.V.S. and the Degree of B.Sc. Students attended from 22 counties in Scotland, 19 counties in England and Wales, and 5 counties in Ireland, as well as from the Channel Islands, India, South Africa, Kenya, Nyasaland, Southern Rhodesia, the Gold Coast, the Federated Malay States, Italy, and China. It is suggested that the increase may be due to slow diffusion among the public of the knowledge that now-a-days many public veterinary appointments are made every year, thus providing graduates with opportunities that were formerly non-existent. The increase is, however, not sufficient to dispel a measure of anxiety for the future. There is no question that appointments—more particularly in the Colonial Veterinary Service—must continue to be made, and made in greater numbers; but whether a sufficiency of suitable graduates will be available to fill them is by no means certain. There is further ground for anxiety, inasmuch as multiplication of appointments makes it more and more difficult to fill gaps formed by wastage due to death and other causes in the ranks of the general practitioner. The maintenance of an adequate number of efficient practitioners is of great moment to the animal husbandry of the home country.

The institution by the University of Edinburgh of a Diploma in Tropical Veterinary Medicine, in the training for which the University and the College will be jointly responsible, is regarded as a matter of considerable importance. It is the first Diploma of its kind to be instituted in Great Britain.

A list of 27 titles of publications and addresses by members of the College Staff is included in the Report.

From The Veterinarian,

SEPTEMBER, 1830.

(*Continued from page* 987.)

I have said that this college of veterinary surgeons should be independent of every school. It is my private opinion that no teacher or lecturer should have a place at the examiners' board of any such college; but as teachers and lecturers are found at the board of examination at Surgeons and Apothecaries' Hall, and the system has worked well, why e'en let them be found here. I would have the examiners, twelve in number at least, selected from the body of veterinary practitioners at a public meeting of that body and the vacancies filled up at an annual public meeting, although I should not much object to suffer the vacancies to be filled up by the remaining examiners. I would have required from every one who presented himself for examination an evidence of veterinary education, in some form or other, and somewhere or other, and no matter where, but for a competent period (say two or three years); some portion of that, however, would be spent under a public teacher; and it would be the fault of the St. Pancras teachers if they did not bear off the bell. I could not be assured that the student would possess the anatomical knowledge, which is the only sure foundation of good practice, without this. Lastly, I would have the examination strictly veterinary, and extending to the whole duty of the veterinary surgeon, and public.

I ask again, gentlemen, why this has not occurred to you? why you have not publicly advocated it? or whether you can state any plan so well adapted to remedy the evils which you have too truly proved to exist? Those already in practice must be left to pursue their course. We must have no *ex post facto* laws, for they are manifestly unjust; but we should thus guard against the future admission of incompetent persons; and much sooner than you or the "Stander-by" expect, the character of the profession would be redeemed.

Are there none among us who have sufficient spirit and influence to set this a-going? Is there no public-spirited senator who will ensure the gratitude of our profession, and of the public, by bringing it under the cognizance of the legislature? Such, I have no doubt, will soon be found. The grant from government for the establishment of this *true* veterinary college would not be great; and at no distant period of time, this college, like the others, would support itself.

In advocating this, what harm are we doing to anyone? Let the St. Pancras school still remain. Its number of subscribers, its number of patients, its number of pupils need not be diminished: its professors need not be pushed from their chairs. Nay, the school, roused to exertion by the fact of the competency of its pupils being submitted to the examination of another board and by the probable starting of rival schools, would be materially improved, and its students, and its funds, and its patients, and its subscribers, would increase with that improvement. We would only put the St. Pancras school on the same footing with Guy's, and St. Thomas's, and Bartholomew's, and St. George's Hospitals, and the Windmill Street, and the Aldersgate schools, and even the London University and the King's College. They confer no degrees; they are content with the *education* of the student, and there is an honourable rivalry among them, who shall best educate him: they leave it to another board to decide on the result of their efforts, and the competency of their pupils; and I ask, in the name of common sense, what claim the veterinary school at St. Pancras has to privileges which none of the others enjoy, and which they would be hooted and despised if they urged. There is, indeed, one set of men whom I should displace, men whom I sincerely esteem, and to whom I owe much gratitude, but who are now pertinaciously, and, I may say, almost dishonourably occupying a post which is no longer justly theirs, and by that occupation assisting in the degradation of our profession: but I am sure there is in the majority of them, nay, in all of them, when old connections and habits do not blind them to a sense of propriety, that good feeling which would induce them to retire without a murmur. Let no one tell me that I am attempting to degrade the St. Pancras college when I leave it every privilege enjoyed by the highest medical school in the metropolis, and only take from it that anomalous office which it ought never to have been permitted to exercise, and which it has exercised to its own and our disgrace.

Let me enlist you, gentlemen, in the accomplishment of this important, and reasonable, and truly just object; and until it be accomplished, I would say, pursue the path which you are now treading. Improve the present education of the veterinary pupil. The establishment of the college which I have recommended will take a great deal of work off your hands: it will render our principal school solicitous that its pupils shall pass the ordeal of such a board, or it will give existence to other schools, more efficient, and which would stimulate the old one to do its duty. In either case, good would result. Improve the education of the veterinary pupil. Expose the abuses of the St. Pancras school, and especially use your powerful influence to promote the decisive step to which I have referred.

AN OLD VETERINARY SURGEON.

Notes and News.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events.

Nov. 3rd.—Meeting of the Editorial Committee, N.V.M.A., at 2 Verulam Buildings, Gray's Inn, W.C.1, 4.30 p.m.

Nov. 5th.—Meeting of the South-Eastern Division, N.V.M.A., at Tunbridge Wells.

Nov. 6th.—Annual Dinner of the Central Division, N.V.M.A., Savoy Hotel.

Nov. 8th.—Meeting of the Scottish Branch, N.V.M.A., at Stirling.

Nov. 12th.—Meeting of the Western Counties Division, N.V.M.A., at St. Austell.

Personal.

The services of Dr. H. H. Curson who, at the beginning of the year, was invited by the Portuguese Government to be Director of the Veterinary Research Laboratory at Lourenco Marques, have been requested by the Imperial Government for work in N'gamiland with Dr. Hale Carpenter in connection with trypanosomiasis. It was expected he would leave for the Bechuanaland Protectorate to-day. Dr. J. Quinlan will deputise as Hon. Secretary and Treasurer of the South African V.M.A. during his absence.

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Appointment.—Mr. Frederick Blakemore, M.R.C.V.S., of Nantwich, Cheshire, has been appointed Instructor in Veterinary Science to the Glamorgan Agricultural Committee.

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At the Annual Meeting of the Liverpool and District Devonian Society, Mr. Warwick Fowle, M.R.C.V.S., of Birkenhead, was congratulated upon his recovery from his recent serious illness and was elected Vice-President for the ensuing year.

Obituary.

Mr. William Ridgman, M.R.C.V.S., Liskeard.

"The death occurred at West Street on Saturday, in the house where he was born, and lived all his life, of Mr. William Ridgman, M.R.C.V.S., one of Liskeard's oldest and most respected inhabitants," says *The Cornish Times* of October 17th.

"Aged 78 years, for a generation he was a familiar figure throughout South-East Cornwall, where he carried on an extensive practice as a veterinary surgeon in succession to his father. He qualified at London on July 3rd, 1877, and in 1905 sold the practice to Mr. John Dunstan, who died last month.

"Mr. Ridgman's skill and great experience won for him the trust and confidence of agriculturists and the public generally. A great lover of horses, he was a regular follower of the East Cornwall Hunt in former years.

"As an enthusiastic Freemason, he was one of the oldest Past Masters of St. Martin's Lodge, No. 510, Liskeard, and was honoured with the rank of Provincial Grand Deacon of Cornwall in 1907. He leaves a widow and one son."

At the interment the Western Counties V.M.A. was represented by Mr. C. Crowhurst, of Bodmin.

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Funeral of Mr. A. Holman Berry, F.R.C.V.S.

The funeral of Mr. Arthur Holman Berry, F.R.C.V.S., of Bayard Lodge, Parkstone Road, Poole, whose death was reported in last week's *Veterinary Record*, took place on Wednesday, October 22nd, at Poole Cemetery, following a service at St. Paul's Church.

For 30 years Mr. Berry had been associated with the Ministry of Agriculture, and for a great part of that time was Chief Veterinary Inspector for the South of England. He had lived in London and took up his residence in Poole about five years ago. While on a visit to London has was taken suddenly ill and died in St. Bartholomew's Hospital.

At the interment the Ministry of Agriculture was represented and professional colleagues of Mr. Berry from a wide area were also present, with representatives of many South of England police forces.

Dissection of a Cat in School.

Action by the R.S.P.C.A.

"The Royal Society for the Prevention of Cruelty to Animals announces," says *The Times*, 'that correspondence has taken place with the Board of Education over the fact that a schoolmaster at Haverthwaite had given a talk to his pupils on physiology and had illustrated the lesson by means of a cat, which, it was alleged, had been put to sleep with chloroform and then dissected before the scholars.

"The Society communicated with the President of the Board of Education, asking if the allegations were correct, and what the object of such instruction was, as one would presume it was given to children who would not ordinarily be trained for the veterinary or medical professions. The Society's view was also stated that, in the hands of unskilled people, there might be a grave risk of not killing such animals properly, and that such lessons might instil in the minds of the children the idea of dissecting animals themselves. The reply from the President of the Board of Education stated that steps had been taken to deal with the matter so far as this school was concerned. The suggestion that similar lessons were given in other elementary schools did not, so far as he had been able to ascertain, appear to have any foundation. Such dissection of mammals or birds as did take place was practically confined to the sixth forms of secondary schools taking the first M.B. examination or certain branches of the Higher Schools Certificate.

"'I am, however, obliged to you for calling my attention to the incident,' the reply continued, 'which I propose to refer to a panel of Inspectors who have in preparation one of a number of documents which are intended to offer guidance to the teachers and local education authorities on the various subjects of the curriculum for the new type of school which is being evolved for children aged 11-15.'

"The report of the schools inspector stated that, as a result of a discussion with the headmaster and the science teacher (together) at this school, there is to be no further dissection of animals' bodies. Points which could not be dealt with by diagram or models were to be omitted."

International Institute of Agriculture.

"The International Institute of Agriculture at Rome has developed to remarkable proportions in the 25 years since it was founded, but it is doubtful if its growth has followed exactly the lines envisaged by its American instigator, Mr. David Lubin," says the Agricultural Correspondent of *The Times*. "I was privileged to have a long interview with Mr. Lubin on his way through London to Rome in the early years of the movement, and the impression he gave me was that the bureau was to be concerned more with the collating and dissemination of information of current value than with the preparation and circulation of international statistics. Recognition of the abounding difficulties suggests that the institute has developed in the only directions practicable, but David Lubin was so keen an enthusiast that the mere mention of obstacles to him at that time would have roused him to anger. His conception of the bureau was that any marketing centre in any hemisphere would have only to ring up another to obtain the information desired. Mr. Lubin showed boundless energy and the fullest confidence in the value and future of the institute."

Cereal Importation and Animal Disease.

The *Irish Times* reports that in the Northern Ireland House of Commons recently, questions were asked regarding the dumping of Russian oats in Belfast.

The Minister of Agriculture (Sir Edward Archdale) said that 1,350 tons of Russian oats were landed in Belfast the previous week, consigned to four Belfast firms.

With regard to a suggestion of animal disease, it was desirable to bear in mind that a very substantial proportion of the imports of maize into the United Kingdom came from countries where foot-and-mouth disease was prevalent. There had never been any evidence to suggest that such importations of oats and maize rendered this country liable to outbreaks of foot-and-mouth disease. Consequently the Imperial authorities had no import restrictions on the importation of cereals into the United Kingdom. The Ministry was watching the position carefully, but although these oats were of poorer feeding quality than home-produced oats, at present there were no grounds on which such importations could be restricted.

National Horse Association's Gold Medal Award.

The Council of the National Horse Association has awarded the association's gold medal and merit certificate to Police-constable William D. Sinclair, of the Metropolitan Police. While on duty in Dowsell Road, Leyton, he saw the entrance doors of a stable blazing fiercely. He scaled a corrugated iron fence into the yard and, with the aid of his truncheon, broke the chain, padlock and door panels, and, entering the stable found three horses within. He cut the rope of the halters and got the horses out one by one, covering their heads with a potato sack. The Council considered that the constable's action was very praiseworthy.

H.M. Stationery Office Publications.

The undermentioned have been published recently. Copies can be purchased though any bookseller, or directly from H.M. Stationery Office, at the following addresses:—London: Adastral House, Kingsway, W.C.2, and 28, Abingdon Street, S.W.1; Cardiff: 1, St. Andrew's Crescent; Manchester: York Street; Edinburgh: 120, George Street.

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Correspondence.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.

All correspondence must bear the name and address of the contributor for publication.

The Editor does not hold himself responsible for the opinions of his correspondents.

Calcium Chloride and Milk Fever.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—In view of the advertised statement of the makers of the calcium chloride solution for the intravenous injection treatment in cases of milk fever that it is supplied to veterinary surgeons only, and to save making individual reply to numerous requests for their name, I can now state that it is made by the Norden Laboratories, Lincoln, Nebraska, and is sent out in rubber-capped bottles containing 250 c.c. of the solution, priced at 90 cents per bottle.

This method of treatment was first brought to my notice by my old friend Mr. R. C. G. Hancock, M.R.C.V.S., but the results obtained from the first two cases treated with a solution that I made up myself to the strength he advised were most disappointing. The only drawback to the treatment is the serious abscess formation, with risk of considerable sloughing, that will occur if any is allowed to escape outside the vein. On the other hand, it must be remembered that abscess formation will often occur with the much-vaunted calcium gluconate treatment, if unfiltered solutions are used, despite statements that have been made to the contrary, and even in the case of the sterile solution which is sent out in ampoules, hard fibrous swellings often persist for some time. These statements are supported by communications I have received from members of the profession who have written me on this subject. I advise calcium chloride in severe cases. Until the phenomenon of milk fever is better understood, I think that we should be very unwise to discard udder inflation altogether. The results published in America from the use of calcium chloride are most encouraging, and, in the severe cases so often encountered, intravenous treatment is by far the most effective.

Yours faithfully,

J. F. D. TUTT, M.R.C.V.S.

1 St. Cross Road,
Winchester.
October 23rd, 1930.

Curative Serum in Distemper.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—In Mr. H. C. Smither's article on "Thyroid Extract in the Treatment of Distemper," he states that "No curative serum is at present available."

There is a curative serum available in Cutter's Homologous Canine Anti-Distemper serum, and in my hands this product has given excellent results. The only thing against it is its high price, *i.e.*, 7s. 6d. per 10 c.c., but where money is no object and the life of the animal comes first, one's clients do not usually quibble at its expense.

Yours truly,

FRANK CHAMBERS.

4 Market Street,
Wolverhampton.
October 26th, 1930.

The Editor acknowledges the receipt of the following:—Communications from Sir John Moore (London), Mr. M. Tailby (Birmingham), Colonel G. K. Walker (Abingdon) and Mr. D. R. Wood (Somerset County Laboratory).